

Sub 617  
1 1. A negative electrode for an electrochemical  
2 cell, comprising zinc alloy particles suspended in a fluid  
3 medium, at least about 10 percent, by weight, of the zinc  
4 alloy particles being of -200 mesh size or smaller.

1 2. The negative electrode of claim 1, wherein at  
2 least about 25 percent, by weight, of the zinc alloy  
3 particles are of -200 mesh size or smaller.

1 3. The negative electrode of claim 2, wherein at  
2 least about 50 percent, by weight, of the zinc alloy  
3 particles are of -200 mesh size or smaller.

1 4. The negative electrode of claim 3, wherein at  
2 least about 80 percent, by weight, of the zinc alloy  
3 particles are of -200 mesh size or smaller.

1 5. The negative electrode of claim 1, wherein at  
2 least about 10 percent, by weight, of the zinc alloy  
3 particles are of -325 mesh size or smaller.

1 6. The negative electrode of claim 5, wherein at  
2 least about 45 percent, by weight, of the zinc alloy  
3 particles are of -325 mesh size or smaller.

1 7. The negative electrode of claim 6, wherein at  
2 least about 80 percent, by weight, of the zinc alloy  
3 particles are of -325 mesh size or smaller.

1 8. The negative electrode of claim 1 further  
2 including a surfactant.

1 9. The negative electrode of claim 1 wherein the  
2 fluid medium comprises an electrolyte and a thickening  
3 agent.

1 10. The negative electrode of claim 9 wherein the  
2 zinc alloy particles include a plating material from the  
3 group consisting of indium and bismuth.

1 11. The negative electrode of claim 1 wherein at  
2 least about 25 percent, by weight, of the zinc alloy  
3 particles are between about 20 and 200 mesh size.

1 12. The negative electrode of claim 11 wherein at  
2 least about 50 percent, by weight, of the zinc alloy  
3 particles are between about 20 and 200 mesh size.

1 13. The negative electrode of claim 1 wherein the  
2 zinc alloy particles are generally acicular, having a length  
3 along a major axis at least two times a length along a minor  
4 axis.

1 14. The negative electrode of claim 1 wherein the  
2 zinc alloy particles are generally flakes, each flake  
3 generally having a thickness of no more than about 20  
4 percent of the maximum linear dimension of the particle.

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15. A negative electrode mixture for an  
2 electrochemical cell, comprising zinc alloy particles  
3 suspended in a fluid medium with the zinc alloy particles  
4 comprising less than about 55 percent of the electrode  
5 mixture, by weight; the zinc alloy particles including a  
6 sufficient proportion of particles of about -200 mesh size  
7 or smaller to provide an electrode resistivity of less than  
8 about 0.2 ohm-centimeters.

16. The negative electrode mixture of claim 15  
2 wherein the zinc alloy particles comprise less than about 45  
3 percent, by weight, of the electrode mixture.

17. The negative electrode mixture of claim 15,  
2 wherein at least about 10 percent, by weight, of the zinc  
3 alloy particles are of -200 mesh size or smaller.

18. The negative electrode mixture of claim 17,  
2 wherein at least about 10 percent, by weight, of the zinc  
3 alloy particles are of -325 mesh size or smaller.

19. The negative electrode mixture of claim 15  
2 wherein at least about 25 percent, by weight, of the zinc  
3 alloy particles are between about 20 and 200 mesh size.

20. A primary electrochemical cell having  
2 a cathode,  
3 an anode comprising zinc alloy particles suspended  
4 in a fluid medium, at least 10 percent, by weight, of the  
5 zinc alloy particles being of -200 mesh size or smaller, and  
6 a separator between the cathode and the anode.

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1 21. The primary electrochemical cell of claim 20,  
2 wherein at least about 25 percent, by weight, of the zinc  
3 alloy particles are of -200 mesh size or smaller.

1 22. The primary electrochemical cell of claim 21,  
2 wherein at least about 50 percent, by weight, of the zinc  
3 alloy particles are of -200 mesh size or smaller.

1 23. The primary electrochemical cell of claim 22,  
2 wherein at least about 80 percent, by weight, of the zinc  
3 alloy particles are of -200 mesh size or smaller.

1 24. The primary electrochemical cell of claim 20,  
2 wherein at least about 10 percent, by weight, of the zinc  
3 alloy particles are of -325 mesh size or smaller.

1 25. The primary electrochemical cell of claim 24,  
2 wherein at least about 45 percent, by weight, of the zinc  
3 alloy particles are of -325 mesh size or smaller.

1 26. The primary electrochemical cell of claim 25,  
2 wherein at least about 80 percent, by weight, of the zinc  
3 alloy particles are of -325 mesh size or smaller.

1 27. A negative electrode slurry for an  
2 electrochemical cell, comprising zinc alloy particles  
3 suspended in a fluid medium including an electrolyte, the  
4 slurry having a resistivity of less than about 0.2 ohm-  
5 centimeters and the zinc alloy particles comprising less  
6 than about 55 percent, by weight, of the slurry.

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28. A method of generating an electric current,  
comprising accumulating ions on the surface of zinc alloy  
particles suspended in a fluid medium containing an  
electrolyte, at least about 10 percent, by weight, of the  
zinc alloy particles being of -200 mesh size or smaller.

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